

CI_OnlineResource conventions for WCS data access

Purpose

This document purpose is to start a discussion to clarify the usage of the CI_OnlineResource section of ISO 19115 data model to describe how to perform WCS data access (e.g. following a CSW GetRecords).

Proposed metadata usage

We identified the following constraints:

- The CI_OnlineResource section should support automated processing (i.e. the access description should be machine-understandable/processable in a convenient way).
- Both resource-oriented access (i.e. information on how to access directly the data) and service-oriented access (i.e. information on how to access data through a specific service interface) should be taken in account.

The following table summarizes the relevant ISO 19115 definitions:

Name	Definition	Obligation	Domain
CI_OnlineResource	Information about on-line sources from which the dataset, specification, or community profile name and extended metadata elements can be obtained		
linkage	Location (address) for on-line access using a Uniform Resource Locator address or similar addressing scheme	M	URL
protocol	Connection protocol to be used	O	Free text
applicationProfile	Name of an application profile that can be used with the online resource	O	Free text
name	Name of the online resource	O	Free text
description	Detailed text description of what the online resource is/does	O	Free text
function	Code for function performed by the online resource	O	CI_Online FunctionCode

We propose to agree on the following use of the above optional metadata:

- The “name” metadata should be the name of the Coverage
- The “function” metadata should be “download”
- The “protocol” metadata domain should be a urn conforming to OGC #07-107r3 Service Type Branch (see also <http://www.opengeospatial.org/ogcUrnPolicy>), respectively:

For WCS 1.0, one of:

- urn:ogc:serviceType:WebCoverageService:1.0:HTTP
- urn:ogc:serviceType:WebCoverageService:1.0:HTTP-GET

- urn:ogc:serviceType:WebCoverageService:1.0:HTTP-POST
- urn:ogc:serviceType:WebCoverageService:1.0:HTTP-SOAP

For WCS 1.1.0, one of:

- urn:ogc:serviceType:WebCoverageService:1.1.0:HTTP
- urn:ogc:serviceType:WebCoverageService:1.1.0:HTTP-GET
- urn:ogc:serviceType:WebCoverageService:1.1.0:HTTP-POST
- urn:ogc:serviceType:WebCoverageService:1.1.0:HTTP-SOAP

The last part of the above urn's identifies the service binding, by means of which the linkage semantics can be identified, as follows:

- **HTTP**: the linkage is to be intended as the **WCS endpoint** to use for HTTP requests. The client may use it to retrieve the GetCapabilities document to further inspect the operations bindings and parameters, before issuing a GetCoverage.
- **HTTP-GET**: the linkage is to be intended as a direct locator of the coverage, with the appropriate KVP parameters needed by the HTTP-GET binding of WCS (**GetCoverage operation**). The client may use it to directly download the data, possibly after adding/editing the KVP parameters.
- **HTTP-POST**: the linkage is to be intended as the WCS endpoint to use for a HTTP-POST **GetCoverage** request. The client should know the appropriate parameters to put in the POST request by other means (there are no ISO metadata for this purpose).

Examples

As an example of the above usage for a service oriented access:

linkage http://example.wcs.endpoint?

protocol urn:ogc:serviceType:WebCoverageService:1.0:HTTP

name myCoverage

function download

In this case the client will need to access WCS GetCapabilities and DescribeCoverage operations to retrieve the possible parameters to use to issue the GetCoverageRequest on the coverage “myCoverage”.

As an example of the above usage for a resource oriented access:

linkage

http://example.wcs.endpoint?service=WCS&version=1.0.0&request=GetCoverage&format=myFormat&coverage=myCoverage&crs=myCRS&bbox=myBBOX

protocol urn:ogc:serviceType:WebCoverageService:1.0:HTTP-GET

name myCoverage

function download

In this case the client could directly issue the WCS access operation (GetCoverage), possibly after modifying the parameters.

Actions

The following urn are already registered in the ogc namespace:

- urn:ogc:serviceType:WebCoverageService:1.0
- urn:ogc:serviceType:WebCoverageService:1.1.0

As a future action, the proposed binding related urn should be registered in the ogc namespace,

following the appropriate procedure.

Contacts

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